

## U. S. DEPARTMENT OF AGRICULTURE,

STATES RELATIONS SERVICE.

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## MARKETING FARM PRODUCTS.

SUGGESTIONS FOR TEACHERS IN SECONDARY SCHOOLS.<sup>1</sup>By H. P. BARROWS, *Specialist in Agricultural Education.*

## INTRODUCTION.

The marketing of farm products, including the subject of prices received by the producer and those paid by the consumer, presents many problems. In solving these education should play a large part. Though much is being attempted by teachers of agriculture in secondary schools in the teaching of marketing, they are handicapped by a lack of properly prepared material for school use. To supply their needs and to aid other teachers in the use of the publications of this department pertaining to the marketing of farm products this paper has been prepared.

## RELATION OF SUBJECT TO COURSES OF STUDY.

*Relation to courses in production.*—The agricultural curriculum of the secondary school consists of courses which deal primarily with production. The courses given most attention are agronomy, which deals with field crops; horticulture, including the production of fruits and vegetables; and animal husbandry, which includes the production of meat, poultry, and dairy products. Inasmuch as the modern farmer produces the greater part of his crops for markets, a consideration of the marketing problem will of necessity enter into courses which deal primarily with production. Not only must the requirements of the market be kept in mind in connection with production from the selection of the seed or breeding stock to the harvesting and preparation for market, but it will also be found difficult to draw a line as to where production ends and marketing begins. From the standpoint of the farmer the preparation of products for the market is one of the most important phases of the problem. This phase may be considered to the best advantage in connection with production, as may also questions of market grades and requirements.

*Relation to rural economics.*—Farm management as usually taught in the secondary school embraces some of the closely correlated principles of rural economics. Such a course, if given after the students have had special courses dealing primarily with production, gives an excellent opportunity for a consideration of the organization of the farm as a whole from a business point of view and a review of the other courses in the light of a broader knowledge of the various phases of farming. Part of such a course may be given very well to general problems of marketing and especially to those phases which involve principles of economics which may not be developed in the earlier courses and which apply equally well to all kinds of produce. Cooperative marketing, questions relating to transportation and finance are suggestive of such problems as may be involved in this course.

Inasmuch as different problems in teaching marketing are presented in the different courses, the suggestions which follow are grouped according to the

<sup>1</sup> Prepared under the direction of C. H. Lane, Chief Specialist in Agricultural Education, States Relations Service.

phase of farming involved. Many of the suggestions, however, which are given in connection with the marketing of fruits and vegetables will apply to the teaching of marketing other farm products.

## I. MARKETING FRUITS AND VEGETABLES.

### A SURVEY OF LOCAL CONDITIONS.

*Purpose of survey.*—(1) To gain information and experience as a basis for classroom instruction, practicums, and home-project work.

(2) To give students an opportunity for development and to arouse interest in the subject and the community's needs.

(3) To furnish a basis for community service.

In a general way it may be stated that if the instruction of the school is to be adapted to the interests of the students and the needs of the community, the teacher must know those needs. The survey means a systematic study to find them out. At the same time it should be remembered that the students will get out of it in proportion to what they put into it, hence the need for their active participation. Although one of the aims may be to find out their interests, the fact that their interests may be developed should not be overlooked.

*Method of survey.*—Inasmuch as the primary purpose of the survey is to link the work of the school with the work of the home, a beginning should be made with the home farms of the students. Each student should be required to bring to the school definite information in regard to marketing fruits and vegetables on the home farm. The teachers with the aid of the students may then proceed to secure information from other farmers and the community in general. In using this information later it will be well to have it tabulated as far as possible. It will be helpful also for the students to make a map showing the farms in their relation to packing houses and shipping points on which the condition of the roads is indicated.

The following outlines will not cover all sections but should be suggestive of the information desired, and definite questions pertaining to local conditions which should be asked.

### STUDENT'S SURVEY OF HOME FARM WITH REGARD TO MARKETING FRUITS AND VEGETABLES.

1. Estimated production.
  - (A) Fruit.
  - (B) Vegetables.
2. Where and how is the produce sold?
3. Methods of grading and packing.
4. Sources of crates and packing material.
5. By whom is the grading and packing done?
6. Packing houses and general facilities for packing.
7. Use of unmarketable produce.
8. Care of surplus—storage facilities.
9. Representative prices on farm compared with wholesale and retail prices in nearest city market.
10. Marketing problems considered most urgent upon the farm.

### COMMUNITY SURVEY OF MARKETING FRUITS AND VEGETABLES.

1. Estimated product of district.
  - (A) Fruits.
  - (B) Vegetables.
2. Markets.
  - (A) Local.
    - (a) Nature.
    - (b) Estimated percentage of each crop taken care of.
  - (B) Outside of district.
    - (a) Nature and distance.
    - (b) Estimated percentage of each crop to be sold.
- 3 Shipping facilities.
  - (A) Local buyers.
  - (B) Cooperative shipping associations.
  - (C) Packing houses, loading platforms, etc.

#### 4. Transportation facilities.

- (A) Roads—Nature and grade toward shipping stations and near-by markets.
- (B) Railroads—Number, extent, and nature of service.
- (C) Express and parcel post service.

#### 5. Efficiency of system.

- (A) Comparison of prices on farm with wholesale and retail prices in consuming centers.
- (B) Assignment of handling costs.
- (C) Facilities for handling surplus and waste.
  - (a) Storage facilities.
  - (b) Canneries, evaporators, and other factories.
- (D) Reputation of district.
- (E) Extent of losses incurred.

#### 6. Problems in marketing and needs of community as brought out in 1-5.

### CLASS WORK BASED ON PROBLEMS AND PROJECTS.

*Suggestive problems.*—Growing out of the survey there will doubtless arise many problems the solution of which may be assigned to individual students or may be undertaken by the class as a whole. For example, each student may be asked to trace some of the produce from his home town to the ultimate consumer, making a record of the time and expense involved. Cooperation with a city school which is studying marketing from the consumer's point of view may be secured to the advantage of both schools. The agricultural students may follow a consignment in its preparation for market and shipment, and the students of the city school take it up as it reaches the city. Records should be kept of methods and costs of handling and reports exchanged. The data should be used as a basis for class work.

A number of schools have aroused interest in a study of market conditions by having the students follow the market prices quoted on certain products for an entire season and present the results in a graphic form. One student may work out curves for apples in different markets, another for cabbage, or different markets may be assigned to different students to watch with respect to a number of products.

*Relation of problems to projects.*—In a sense the home project of a student is a large problem, which he is working out at home. In the usual sense in which we regard a home project, it presents a number of problems for the student to meet. The student who is growing either fruits or vegetables for sale as a home project will have in most cases marketing problems. Where most of the students in a class in horticulture have such projects, these problems may very well form the basis for a good part of the work of the classroom.

### USE OF REFERENCE MATERIAL.

The interests of the community may require that emphasis be placed upon the marketing of a particular crop, while the interests of the students may be concerned in the marketing of the product of a variety of projects. To satisfy both demands the time of the class as a whole may be taken up largely with the community problem, while individual assignments should be made to aid the students with their special problems. For example, a school district may be interested largely in growing peaches, and will have, without doubt, the problem of marketing its peaches to advantage. If the school serves the community as it should, the class in horticulture will attack the problems of packing and marketing peaches in a practical way. The members of the class, however, may have as home projects or as a part of their home farm work the production of apples, strawberries, cantaloups, or general truck crops. Each student should be given aid according to his particular needs as far as possible. In adapting the course to meet the particular needs of a community or any individual student, it will be necessary to supplement the general textbook with special reference matter. It is likely that the State college or department of agriculture may have bulletins which will give definite aid in solving the local problems. The number of bulletins of this department pertaining to marketing is increasing rapidly. From the list given at the end of this document, Farmers' Bulletins and Yearbook articles may be selected which may be assigned for special reports by individual students or form the basis for class discussion of some special marketing problem. Although the department bulletins listed are of a more technical nature and deal with subjects more special



in nature or with more restricted regions, they will prove helpful in adapting the course to the particular problems of a community. For example, the class in horticulture in a section where strawberries are a main crop or where the students have home projects in growing strawberries will use to advantage Department Bulletin 477, Marketing and Distribution of Strawberries in 1915. Likewise in a western cantaloup section Department Bulletin 401, Marketing and Distribution of Western Muskmelons in 1915, will prove very helpful. These bulletins not only give statistics and prices but also suggest improved methods of handling the crop.

In keeping in touch with prices and market conditions the school should receive daily papers from its near-by markets or those cities which represent the chief markets for the produce of the community. Weekly trade papers will be found very helpful for this purpose. If the students are required to keep an account of daily fluctuations in prices, they will have an incentive which will develop interest in the market reports. Files should be kept of clippings from farm and trade papers pertaining to marketing and market conditions. In time a great deal of information may be accessible not only to students, but to the community at large. To be of value, however, this information should be properly filed and indexed. If the students do the work it will not only be of greater interest to them, but it will also aid in establishing a very good habit in them as farmers and business men.

As a means of arousing interest on the part of the students in market conditions and at the same time rendering service to the community, one of the New York schools receives the daily market reports from the Bureau of Markets of this department, and has the data received charted and posted prominently for the benefit of students and patrons. For the benefit of other schools which may be interested in receiving these reports the following brief outline of this service as rendered by the Bureau of Markets is given:

#### FRUITS AND VEGETABLES.

Daily market reports of perishable fruits and vegetables.

Weekly carlot summaries. (Of primary interest to newspapers and statistical students.)

Weekly market review. (Of primary interest to newspapers and trade papers.)

#### MEATS AND LIVE STOCK.

Daily market reports on meat trade and live-stock conditions.

#### HONEY.

Semimonthly market reports on honey.

#### WOOL.

Quarterly reports on the supply of wool.

#### DAIRY AND POULTRY PRODUCTS.

Weekly reports on production of creamery butters. The service for dairy and poultry products is now being extended along lines similar to those established for fruits and vegetables.

#### GRAIN, SEED, AND HAY.

Semimonthly market reports on grain, seed, and hay.

#### COLD-STORAGE HOLDINGS.

Monthly reports showing cold-storage holdings on apples, meat, eggs, and dairy products.

It is not expected that all schools will be interested in all these reports. The reports on fruits and vegetables will have the widest application, although there will be cases where the reports on the other products will have a special interest to individuals, if not to the whole class or community. More detailed information and application blanks pertaining to these reports may be obtained from the Bureau of Markets, U. S. Department of Agriculture, Washington, D. C.

#### USE OF ILLUSTRATIVE MATERIAL.

It has been suggested that the prices for a certain crop or product may be shown for the season by a simple graphic curve. Such price fluctuations and other data pertaining to the marketing of crops should be shown on the black-

board or made into permanent chart form on cloth or paper to use in visual instruction. The bulletins listed give maps showing the sources and distribution of various crops, which may be enlarged and used for the same purpose. A series of charts showing systems and methods of packing will be especially helpful with such fruits as apples and peaches packed in boxes. Students in sections backward in packing and not familiar with modern marketing methods will profit from a set of lantern slides showing up-to-date methods which will be applicable in the section in which they live.

Although pictures and charts will prove helpful, they should not take the place of actual visits to good packing houses and markets if such are accessible. Some teachers have reported a great deal of interest having been aroused by trips to near-by city markets. If such trips are arranged, it should be with a definite purpose, and the students should be required each to make a report which should indicate that he had secured some very definite information and suggestions. Fairs and exhibits will prove especially helpful in suggesting standards and methods of grading and packing. The teacher should keep up with the latest and best methods and materials for packing. Samples of new forms of packages should be kept at the schools and demonstrations made of new methods of packing for the benefit of the community as well as the students.

#### PRACTICAL WORK.

Although seeing the actual materials and observing demonstrations of methods are helpful in visualizing the instruction of the classroom, such work should not take the place of active participation on the part of the student in doing the thing. Preparation of produce for market presents phases of farming which require considerable skill. Just how much time should be spent in aiding the students to acquire skill in such practice must be determined according to the aims and organization of the school and the needs of the community. The students who are conducting home projects in either fruit growing or vegetable gardening may have ample opportunity to develop skill in certain phases of packing and preparing produce for market, but even these students with such an opportunity may profit greatly by getting started right under the direction of the teacher at the school. In stimulating effort along the lines suggested below much may be made of the contest idea. It will be especially helpful to have contests in packing along with a school fair in which an exhibit is made of the products of the home gardens and orchards properly prepared for market.

*Making of packages.*—Some time may be spent in getting the student started along the right lines in making crates, boxes, and barrels such as are used, or should be used, on their home farms and in the community. Emphasis should be placed upon using the right tools in the right way, upon neatness and the methods which mean efficiency. There may not be time to develop speed and special skill at the school, but if the students are given the right kind of start they will be able to develop these factors later in their work at home. This work at the school may involve the use of the school shop and may call for cooperation in the teaching of mechanic arts and agriculture. It may be possible for the students to get this practice under better conditions in a neighboring packing house.

*Packing fruit.*—Practice in packing may also be given to best advantage as a rule in a regular packing house. Here again emphasis should be placed first upon getting the students started right in handling the fruit, correct grading, and in neatness in packing without lost motion. Special emphasis must be placed, as a rule, upon care in handling the fruit to avoid bruising and abrasion of the skin. Speed will be developed later. The kind of fruit packed and the methods used will depend upon local needs and conditions. As a rule, it will be better to have high ideals and to establish correct practice with one or two of the leading fruits of the community rather than to attempt a wider range. Special attention should be given the particular form of packing in which the community is weakest or which it needs most.

*Preparing vegetables for market.*—Practice in this line of work may be given best in connection with the school or home gardens. Although this practice will also vary with the different sections, as a rule there will be abundant opportunity for much-needed direction of such work as bunching and washing early root crops, keeping them in good shape awaiting shipment or hauling to market; grading and packing of such vegetables as tomatoes, cucumbers, and cantaloups; trimming and packing of lettuce, celery, and cabbage.

*Business practice.*—A great deal of marketing involves business practice, in which the farmer is very apt to be deficient. Apart from general practice in farm accounts which may be given in another course, students may spend considerable time with profit in one or more of the following lines of work:

- (1) Preparing an advertisement for a local paper offering fruits and vegetables for sale.
- (2) Writing letters soliciting orders or pertaining to the shipment and sale of fruits and vegetables.
- (3) Making out invoices, bills of lading, drafts, checks, and other business forms connected with the sale and shipment of produce.

#### COMMUNITY WORK.

*A local market.*—In connection with the instruction in gardening and agriculture in a number of city schools and the related home-project work public markets have been established under the direction and supervision of the teachers of agriculture. The most successful of these markets are managed to a great extent by the students themselves. Definite hours of certain days are set apart as market times when the boys and girls bring their produce to offer for sale to the public. In some cases the boys and girls have had a portion of the general public market assigned to them. In other cases the school market is opening the way for a more general market. Although it may not be possible for students in a rural community to have a public market, what has been done in the city should suggest to them the idea of getting together in a cooperative way to sell and ship their produce. There are special opportunities for the students to cooperate in marketing if they are growing one crop. For example, in a section favorable for growing tomatoes one student may not produce a sufficient quantity to ship to a distant market or to command the respect of buyers. A number of students may form a shipping association patterned after the truly cooperative organizations among adult growers to serve their common interests as far as marketing their product is concerned. Such an organization should not only give them an opportunity to sell their tomatoes to advantage but should also afford excellent opportunity for much-needed training along lines of cooperative effort. Although the primary object of such an organization may be the marketing of the product of its members, its activities may be extended to the purchase of supplies, the production of plants, and such operations as spraying.

*Aiding farmers of community.*—While the duty of the teacher will be to serve his students first, it is not unlikely that a wide-awake teacher who is determined to develop higher ideals and better methods of marketing among his students will have an influence on the community as a whole. In many cases the adult farmers may be reached through the students. In the case of arousing interest in cooperative marketing, perhaps the best way to get the farmers of the community to see its value is to get a working model established among the boys and girls. If any direct aid is given in organization, it should be with the aid of Federal and State specialists. Although the teacher of agriculture may not have time nor sufficient influence to get the farmers together in such an organization, he may be helpful in suggesting to others some helpful ideas and methods of carrying them out. A teacher who devotes his summer time to the supervision of home projects has a special opportunity to give the farmers of the community practical assistance with their marketing problems.

## II. MARKETING POULTRY AND DAIRY PRODUCTS.

Although a number of secondary schools are giving separate courses in poultry keeping and dairy husbandry, in the majority of the high schools these subjects are both included in a general course in animal husbandry. Although each phase of the course offers distinct problems, as there are many common considerations in the marketing of dairy products and poultry products, the two will be treated together.

#### STUDENT'S SURVEY OF HOME FARM.

##### WITH REGARD TO MARKETING POULTRY AND DAIRY PRODUCTS.

#### 1. Estimated production.

- (A) Poultry and eggs.
- (B) Milk, cream, butter, and cheese.



2. Means of disposal.
  - (A) Poultry sold alive.
  - (B) Dressed poultry.
  - (C) Eggs for market and for hatching.
  - (D) Milk sold at wholesale and retail.
  - (E) Cream, butter, and cheese.
3. Methods of handling poultry products.
  - (A) Care of poultry with regard to quality of eggs.
  - (B) Methods of gathering and caring for eggs.
  - (C) Methods of grading and candling eggs.
  - (D) Methods of packing eggs for market and shipment.
  - (E) Methods of killing and dressing fowls.
  - (F) Methods of grading and packing.
  - (G) Methods of shipping live fowls and baby chicks.
4. Methods of handling milk and dairy products.
  - (A) General precautions with regard to the production of clean milk.
  - (B) General equipment and methods of handling milk on the farm.
  - (C) Means of delivery and shipment.
  - (D) Handling of milk at creameries, factories, and stations.
  - (E) Means and methods of distribution in towns and cities.
  - (F) General methods of manufacture of butter and cheese with regard to insuring a good product.
  - (G) Means and methods of marketing such dairy products.
  - (H) What means are used for cooling milk and dairy products at the farm and en route to market?
5. Prices received (each month of the year).
  - (A) Poultry and eggs.
  - (B) Milk and dairy products.
  - (C) Compare prices with wholesale and retail prices in near-by markets.
  - (D) Comparison of prices received with estimated cost of production.
6. Suggestions for improvement of marketing methods.
  - (A) Poultry products.
  - (B) Dairy products.

#### COMMUNITY SURVEY OF MARKETING POULTRY AND DAIRY PRODUCTS.

The outline given for the student's survey of home farm conditions with regard to the marketing of these products should be suggestive of the information to be gained by the teacher and students of the whole community. This community survey should include also the number of creameries, factories, and shippers, the transportation service and the methods of payment for such produce. The information received is to form a basis for classroom discussion of methods and whatever aid the school may give the community to improve its methods of marketing.

#### USE OF REFERENCE MATERIAL.

The suggestions given concerning the use of illustrative material and reference material in connection with the marketing of fruits and vegetables will apply in a large measure to the teaching of marketing poultry and dairy products. Problems connected with the marketing of poultry and dairy products are so closely linked with production that it is difficult to draw the line between production and marketing. This is especially true of market milk. Many of the bulletins dealing primarily with production will be useful in considering marketing problems. In addition to the reference listed at the end of this document the following Farmers' Bulletins will be helpful: 355, A Successful Poultry and Dairy Farm; 602, Production and Handling of Clean Milk; 623, Ice Houses and Use of Ice on the Dairy Farm; 689, Plan for a Small Dairy House.

For schools located near large cities, where dairying is mostly a matter of market milk and where at the present time the question of marketing milk is a very serious one, use may be made of the more technical department bulletins and bulletins of the Bureau of Animal Industry on special market milk investigations.<sup>1</sup>

<sup>1</sup> These bulletins are included in a List of U. S. Department of Agriculture Publications on Dairying for Employed Teachers, which may be obtained from the Division of Agricultural Instruction in Schools, States Relations Service.

## PRACTICAL WORK.

*Preparing and packing eggs.*—An effort should be made to get students started right in the handling of eggs by requiring practice either at home or at school in the following lines:

- (1) Cleaning and grading eggs.
- (2) Candling eggs.
- (3) Preserving eggs in water glass.
- (4) Making cases and containers.
- (5) Packing eggs ready for shipment.

Directions for such practical work may be obtained from Farmers' Bulletin 830, Marketing Eggs by Parcel Post.

*Preparing poultry for market.*—The proper killing and picking of a fowl may be made a demonstration by the instructor to be followed by practice by each student as far as possible. Further practice may be secured at home as occasion for killing poultry is offered. Directions for such practice may be obtained from Bureau of Chemistry Circular 61, How to Kill and Bleed Market Poultry.

*Handling market milk.*—The extent and nature of the practical work given in handling milk must depend of necessity upon facilities at hand. Schools giving a course in dairying and having a dairy equipped for the work will without doubt emphasize practice in cleanly, efficient methods of handling. Some schools have used near-by dairies or dairy farms for the purpose, while others have outlined home work to be undertaken under such supervision as may be given. Students having projects in milk production should be supervised very carefully with regard to their methods of handling milk. Some very successful dairy projects have involved the development of a retail milk route. One student recently visited in Massachusetts secures 1 cent per quart above the market price because of his cleanly methods.

*Parcel-post shipments.*—While there are opportunities to develop a trade through the parcel post in many lines of farm produce, the products of the home garden and the poultry yard are especially adapted to this method of marketing. All students should become familiar with the parcel post and have practice in preparing produce for shipment by mail. It is especially important that students having garden and poultry projects in the open country away from a city market should secure practice in this work. Such practice may be made either home work or school practice in classes in horticulture and animal husbandry. Classes in city high schools may cooperate with classes in rural high schools to the profit of both. For example, a class in home economics which is considering the marketing problem from the consumer's point of view might get in touch with a class in agriculture that is considering the problem as one of production. Arrangements may be made for the students in agriculture to undertake as a class project the shipment of eggs and other produce to be received by the class in home economics. Such a project has possibilities not only in giving practice and business experience but also in developing a cooperative spirit and a closer bond between future producers and consumers.

Directions for packing and shipment by parcel post may be secured from the following Farmers' Bulletins: 830, Marketing Eggs by Parcel Post; 703, Suggestions for Parcel Post Marketing.

## III. MARKETING LIVE STOCK.

In most sections the marketing of live stock offers neither the problems nor the possibilities in connection with secondary school work that other forms of perishable farm produce offer. The actual marketing of farm animals for the ordinary small farmer is a problem of cooperation which may be considered best in connection with farm management and rural economics. If no such course is offered, however, one or two lessons may be given with profit to a consideration of marketing problems. As reference material for such lessons the two following Farmers' Bulletins will be useful: 718, Cooperative Live Stock Shipping Associations; 809, Marketing Live Stock in the South.

In connection with a study of types and breeds and practical work in judging farm animals considerable attention should be given market standards and requirements.<sup>1</sup> In many cases the student's appreciation for good breeding may be developed best by a study of what the market requires. In the stock-feeding

<sup>1</sup> See States Relations Service Doc. 58, Types and Breeds of Farm Animals—Suggestions for Teaching the Subject in Secondary Schools.



sections of the Middle West the farmers have a natural interest in the fluctuating prices of the live-stock markets. In a number of schools in this section the students keep track of the prices throughout the year, making graphs of the results. In some cases interest is added by having the students make pseudo purchases and sales of feeders and finished stock according to current prices. In some cases the feed consumed and the grain made is estimated and the feed charged at prevailing prices, necessitating an eye to be kept on the grain market as well as the live-stock market. Visits to the big markets and stockyards are reported as being profitable when well organized and supervised.

#### IV. MARKETING FIELD CROPS.

As a number of the so-called field crops are garden crops grown on a more extensive scale, the problems connected with their marketing are in many ways an extension of the problems involved in marketing vegetables. This statement applies to such crops as potatoes, sweet potatoes, cabbage, and squash. Many of the garden crops, such as peas, beans, tomatoes, and sweet corn, are grown in an extensive way as field crops for canning factories upon a contract, hence the marketing problem is largely eliminated as far as the farmer is concerned. This is true also of cane and sugar beets grown for factories, seed and other crops grown on contract for concerns permanently established in the community. The marketing of a large percentage of the forage crops is a problem of feeding and marketing in the form of live stock or animal products. The greater part of the remainder of the field crops is staple fiber and food crops known as cash crops, the price and sale of which are mostly outside the influence of the farmer in his present unorganized condition. This class of crops includes cotton, flax, hemp, tobacco, and all of the grain crops. The chief problem for the individual farmer at present in marketing these crops is to learn the market requirements and standards and to work toward meeting them. If the problems connected with organization, such as cooperative warehouses, elevators, cotton gins, flour mills and factories, are considered in the class in farm management and rural economics, the time of the class in field crops devoted to marketing questions may very well be given to grades and standards with practical work in judging. Inasmuch as market standards and requirements vary, it is best for the teacher to secure score cards for judging purposes from the State agricultural college or department of agriculture rather than use general cards prepared for the country at large. The amount of time given to each phase of the work, as well as the nature of the work done, will be determined by local needs and conditions. In certain sections of the South considerable time may be spent with profit in cotton classing and grading. It may be possible to secure the use of a set of standard samples to be used for this purpose through the agricultural college or the county agent. In the Northwest a good deal of attention is given standards and grades of wheat and other small grains, while in the Middle West corn is given more attention.

A number of teachers report that their community problem in marketing is to get the farmers to unite upon one or two standard varieties, so they may put out a uniform product. In some cases the school farms are used largely for growing and disseminating among school patrons pure-bred seed of a variety of corn well suited to the section. School exhibits have proved helpful in a propaganda for better varieties and have at the same time furnished material and opportunity for practical judging by the students. A part of the equipment of the school should consist of samples of the best types of grain and fiber crops suitable to the section in which the school is located.

#### V. MARKETING AS A PHASE OF RURAL ECONOMICS.

The amount of time given to the subject and the nature of the work given will depend largely upon the following factors: (1) Extent and nature of the course; (2) the needs of the community; (3) preparation and maturity of students; (4) home farm needs and interests of students; (5) resources of the teacher. In the last item would be included the training of the teacher in this particular phase of rural economics and the teaching materials he had available. It is assumed that if the interests and needs of the students and the community demand attention to the subject the teacher will do all he can to meet the demand.

The following outline is suggestive of topics to be considered and adapted to meet the needs of each class.

## THE GENERAL PRINCIPLES AND PRACTICES OF MARKETING.

- I Present status of marketing.
  1. Relation to production.
    - (A) General.
    - (B) As studied in agricultural courses; (a) Field crops, (b) animal husbandry, (c) horticulture.
  2. Present-day interest in marketing.
    - (A) From standpoint of producer.
    - (B) From standpoint of consumer.
    - (C) Causes of such interest.
    - (D) Lack of definite knowledge.
  3. Development of markets.
  4. General survey of present marketing system.
- II. Methods of sale.
  1. Selling by contract.
    - (A) Methods of factories, seedsmen, etc.
    - (B) Contracting of grain, etc., for future delivery.
  2. Cash sale on farm.
  3. Cash sales away from farm.
    - (A) "Delivered."
    - (B) f. o. b.
    - (C) "On track."
    - (D) "To arrive."
  4. Consignments.
    - (A) Private sales.
    - (B) Auction sales.
  5. Methods of payment.
  6. Financing the sale of crops.
- III. Storage of farm crops.
  1. Kinds of farm storage.
  2. Advantages of storage on the farm.
  3. Risks of farm storage.
    - (A) Storage in the field.
    - (B) Houses for farm storage.
  4. Storage at selling points.
    - (A) Local storage at shipping points.
    - (B) Storage in consuming centers.
  5. Cold storage of farm produce.
    - (A) Effect on prices and value.
    - (B) Methods of cold storage.
- IV. Transportation in relation to marketing.
  1. Relation of marketing to good roads.
  2. Hauling to local markets.
    - (A) Horse-drawn wagons.
    - (B) The auto truck.
  3. Dependence of marketing on railroads.
    - (A) Relation of farming to railroad service.
  4. Handling perishables.
    - (A) Express and fast freight.
    - (B) Refrigeration.
    - (C) Trolley service.
  5. Rail v. water shipments.
  6. Problems of the shipper.
    - (A) Securing cars.
    - (B) Demurrage rates.
  7. The parcel post.
    - (A) Range of application.
    - (B) Problems in its use.
- V. The cost of marketing.
  1. Distribution of costs on representative products.
    - (A) Fruit and vegetables.
    - (B) Milk and dairy products.
    - (C) Live stock and poultry.
    - (D) Grain and fiber crops.
  2. Cutting down the cost.
    - (A) Methods suggested.
    - (B) Methods now being employed.

## VI. Cooperative marketing.

1. A brief history of its development.
2. Extent of cooperation in representative lines of agriculture.
3. Essentials of a successful association.
4. Advantages to be derived.
5. Problems to be met.
6. Application to the organization of a local industry.

## VII. Review of the principles of marketing in their application to a crop of local importance. (Preferably one of the student's projects.)

1. Relation of production to marketing.
2. Handling of the product.
3. Grading and packing.
4. Method of sale.
5. A record of prices.
6. Means of storage.
7. Establishing a reputation.
  - (A) For the individual.
  - (B) For the community.
  - (C) Advertising.
8. Financing the sale of the crop.
9. Methods of shipping.
10. Selling at the other end.
11. What a cooperative selling association might do for the product in the community.

If the lessons suggested in this outline are to be adapted to meet local needs, it will be necessary to make a general survey of marketing conditions in the community to determine those needs. If special surveys have been made as suggested in connection with the courses dealing primarily with production, the data received may be made the basis for the more general consideration given the subject in this course. There has been nothing in the nature of a general text on marketing written especially for secondary schools. A recent text published primarily for college students has been used for reference purposes successfully by a number of secondary teachers. Considerable aid may be secured by the use of some of the general bulletins on marketing issued in some of the States. From the list of department publications which follow, bulletins may be selected which will be helpful in solving certain local problems and for such general phases of the course as cooperation.

## PUBLICATIONS OF THE UNITED STATES DEPARTMENT OF AGRICULTURE ON MARKETING.

The following Farmers' Bulletins:

548. Storing and Marketing Sweet Potatoes.
656. The Community Egg Circle.
696. Handling and Shipping Citrus Fruit in the Gulf States.
703. Suggestions for Parcel Post Marketing.
707. The Commercial Grading, Packing, and Shipping of Cantaloups.
718. Cooperative Live Stock Shipping Associations.
753. Commercial Handling, Grading, and Marketing of Potatoes.
809. Marketing Live Stock in the South.
830. Marketing Eggs by Parcel Post.
852. Management of Common Storage Houses for Apples in the Pacific Northwest.
879. Home Storing of Vegetables.

The following Department Bulletins:

225. A System of Accounting for Cooperative Fruit Associations.
236. A System of Accounts for Farmers' Cooperative Elevators.
266. Outlets and Methods of Sale for Shippers of Fruits and Vegetables.
267. Methods of Wholesale Distribution of Fruits and Vegetables on Large Markets.
290. Rail Shipments and Distribution of Fresh Tomatoes, 1914.
311. The Handling and Marketing of the Arizona-Egyptian Cotton of the Salt River Valley.
315. Cantaloup Marketing in the Larger Cities with Car-lot Supply, 1914.
375. Disadvantages of Selling Cotton in the Seed.
401. Marketing and Distribution of Western Muskmelons in 1915.
403. A System of Accounts for Live Stock Shipping Associations.





456. Marketing Creamery Butter.  
458. Handling and Marketing Durango Cotton in the Imperial Valley.  
476. A Study of Cotton Market Conditions in North Carolina with a View to Their Improvement.  
477. Marketing and Distribution of Strawberries in 1915.  
Articles in the following Yearbooks:  
1904. Consumers' Fancies.  
1905. Handling Fruit for Transportation.  
1910. Cooperation in the Handling and Marketing of Fruit.  
1912. Handling of Dressed Poultry a Thousand Miles from Market.  
1912. A Successful Method of Handling Vegetable Products.  
1912. Improved Methods of Handling and Marketing Cotton.  
1914. Cooperative Marketing and Financing of Marketing Associations.  
1915. How Hawaii Helps Her Farmers to Market Their Produce.  
1916. Possibilities of a Market Train Service.  
1916. A Federated Cooperative Cheese Manufacturing and Marketing Association.  
1916. Business Essentials for Cooperative Fruit and Vegetable Canneries.  
(Issued December —, 1917.)

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